

modified 27/01/15

Preface

This documentation contains the necessary information to setup and to work with the 2D Moto3 software.

In order to achieve the optimum result when working with the 2D Moto3 software, we recommend you to read the instructions carefully and to follow them step by step.

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Symbols used in the text



These paragraphs contain tips and practical advice for working with the 2D software



In the paragraphs highlighted with this symbol, you will find additional information and it is very important that you follow the instructions given.

1 Introduction

The 2015 Moto3 World Championship requires teams to use a control ECU manufactured by Dellorto. The Dellorto system has a recording device built inside, meaning that all data recording on the Moto3 bike is made by Dellorto.

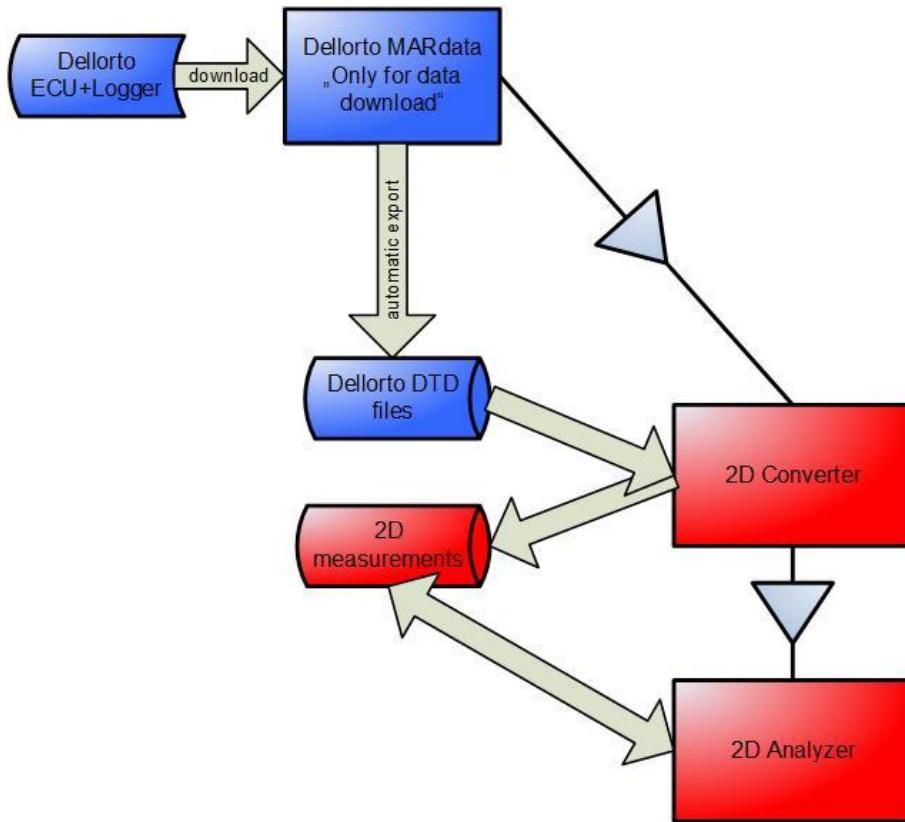
2D have produced a Moto3 software package that works in cooperation with the Dellorto system. This gives the option to use the 2D data analysis software *Analyzer* for making detailed analysis of Moto3 bike data. The package also includes a conversion software that creates 2D data files from the downloaded Dellorto data.

Dellorto offer their “MARdata” software package in two different levels: “**MARdata only for data download**” and “**MARdata Standard**”. The integration of the 2D Moto3 software with both MARdata versions is explained in chapter 2.

The 2D data analysis software is very commonly used in both MotoGP and Moto2 and is therefore highly beneficial for a Moto3 team.

2 Getting started

A) Dellorto MARdata software level “Only for data download”



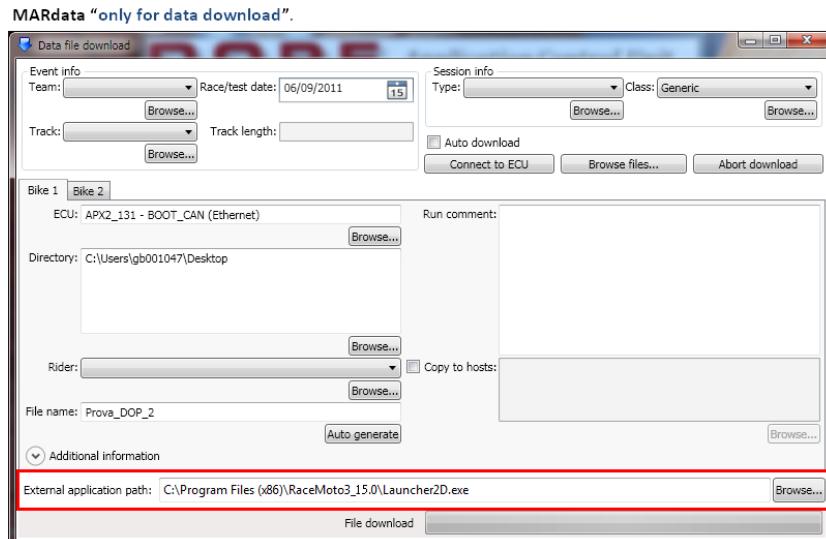
After following some simple steps to correctly define the software, the 2D Moto3 package will make the file conversion automatically after every download.



The following steps are very important, but must only be made once!

Step 1: Define where your data will be stored after downloading (directory)

Step 2: Define the “External application path” as described in the following figure:

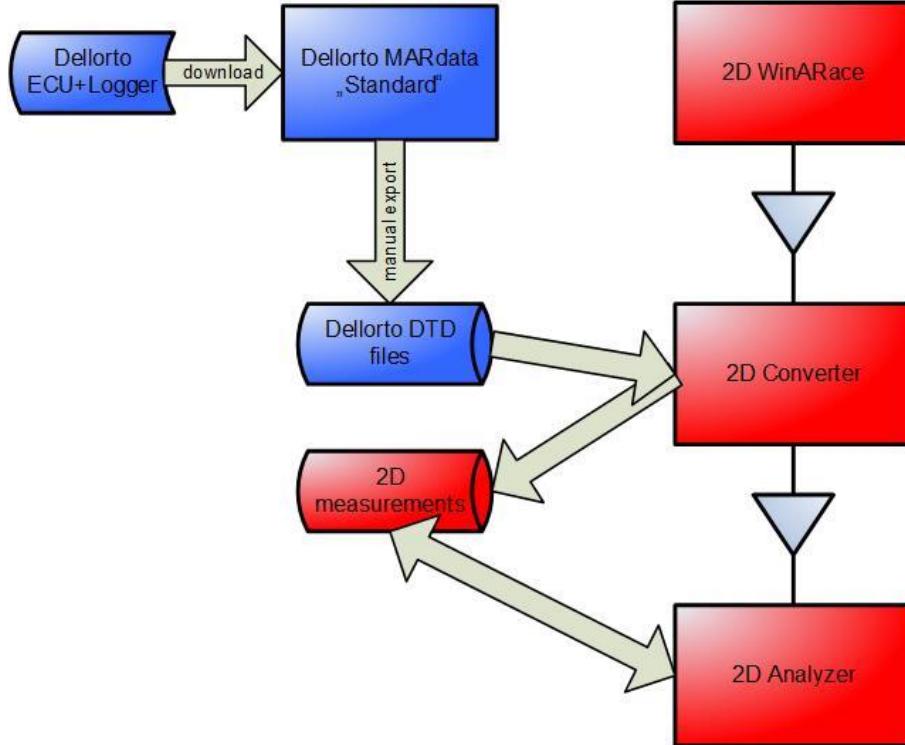


After each Dellorto data download, the 2D conversion software, named **Launcher2D.exe**, will automatically convert the Dellorto file into 2D format, then launch the **2D Analyzer**.



You should also carefully define the “**Directory**” for the downloaded data. See chapter 3 for recommendations about data-file structures.

B) Dellorto MARdata software level “**Standard**”

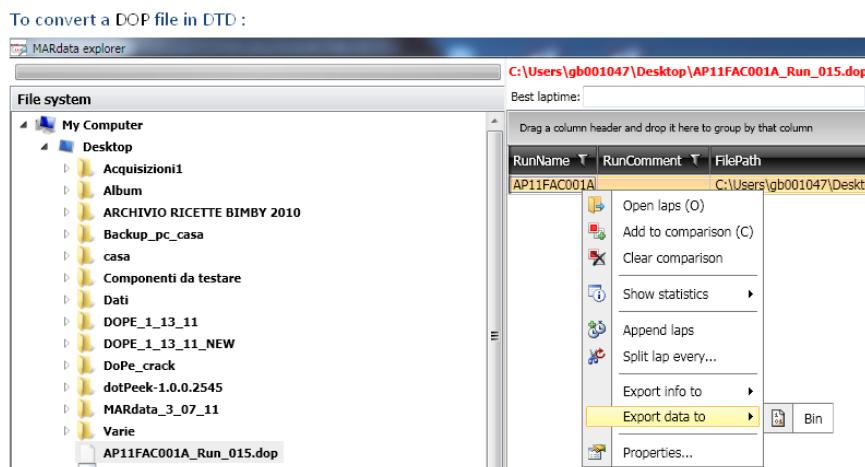


The following steps explain how to manually convert your Dellorto MARdata into 2D format.

Step 1: Open the Dellorto **MARdata explorer**.

Step 2: Navigate to your selected download **Directory**.

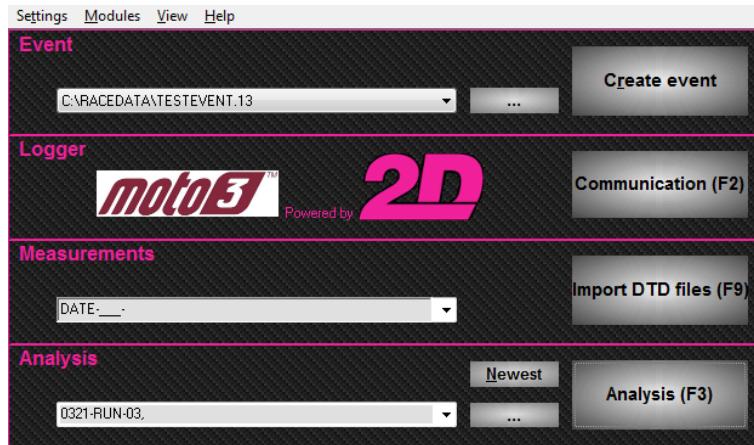
Step 3: Select the MARdata file(s) that you want to convert to 2D format.



Bin label will be Exchange in DTD label .

Step 4: As shown above, **right-click** the selected files, choose “Export data to”, and then choose the correct directory for sending the exported .DTD files.

Step 5: Run 2D program *WinARace* and press **<F9>** or the button **<Import DTD files (F9)>**.



The 2D converter (*Launcher2D.exe*) will run, automatically converting the Dellorto DTD data files to 2D data format. Finally the *2D Analyzer* is launched automatically.

3 Recommended folder structure for racing events

For easy access to your recorded data, it is recommended to have a new folder for each racing or testing event. This way you can more easily and more quickly find the correct information when you need it.

The 2D event is by default identical to the Dellorto event folder.

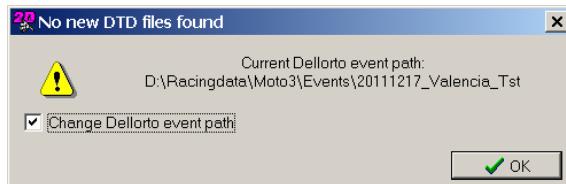
Example:



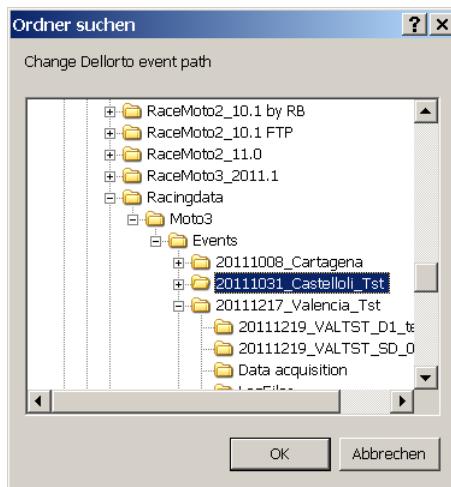
4 Integration with 2D WinARace and 2D Analyzer

Dellorto event selection and creation:

When using for the first time (by “Import DTD files” function in *WinARace*) and for each new event (no more DTD files in the current event), select “**Change Dellorto event path**” as shown in the figure:



Next you must choose the path of new Dellorto event:



Automatic creation of a 2D event:

After selecting the new path of the Dellorto event, the 2D event is defined at the same location. From the previous event, the 2D **special channels** are transferred. The converter will then check for Dellorto .DTD measurement files in (and below) the Dellorto event folder.



“Special Channels” are a function of the *2D Analyzer* that assign special meaning to a data channel, e.g. a recorded channel named “Gas” can be assigned to be the special channel “THROTTLE”. Many different special channels can exist.

Manual creation of a 2D event:

This should only be performed if

- no Dellorto software is installed on the PC
- Dellorto .DTD files have been manually copied from another PC
- you need to organize 2D measurements into another file structure



To manually create a 2D event, use the “**Create Event**” function of 2D program *WinARace*.

For this operation mode, you need to change the file “Moto3.ini” (see chapter 6): modify the entry “**Define 2D event by folder change**” from “=1” to “=0”. You can then create each new event manually using *WinARace*.

5 The 2D Converter

What data is available after conversion?

The 2D Moto3 data converter works to read the format of the Dellorto .DTD files, creating a new 2D measurement that can be analyzed using the 2D software. The following items are taken from the Dellorto .DTD files and compiled inside the new 2D measurement.

Channel data:

Channels and their recorded data which are defined inside the Dellorto .DTD file are converted into regular 2D measurement by transferring each channels'

- name
- dimension
- description
- sampling/frequency
- recorded channel values

Lap triggers:

Lap triggers from Dellorto file are transferred into the 2D measurement with 1/1000 second (0.001) accuracy. This can be used by *2D Analyzer* to correctly split the measurement into laps.

General header information:

The specsheets of the 2D measurement is filled with most entries of Dellorto header data.

Comments:

In the specsheets of the 2D measurement, the "**Comment**" group entries are filled from Dellorto field "comment".

Track map:

The appropriate 2D race track map will be automatically assigned (if it had been undefined yet), according to the content of the Dellorto field "**track.name**".

Converter protocol:

Inside the 2D measurement folder a file named **DTD2D.Txt** holds information about all converted channels.

Permanent file:

The Dellorto field "**bikename**" is used to apply 2D permanent file functionality.

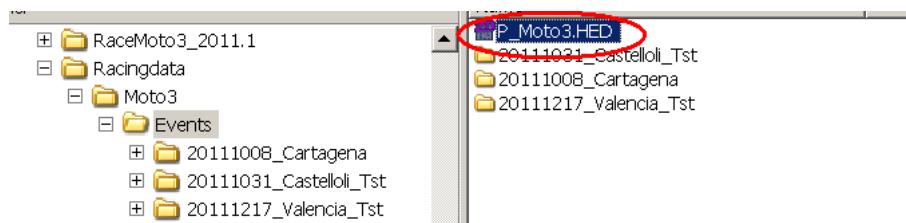
Alternatively (if "bikename" is not available) the Dellorto field "**rider.abbreviation**" is used. By default (i.e. if both "bikename" and "rider.abbreviation" are empty) value "**Moto3**" is used.

This means: the used 2D permanent file must be named "**P_<bikename>.HED**" or "**P_<rider.abbreviation>.HED**" or simply "**P_Moto3.HED**" and must be located inside the data root folder.



Data root is the folder up one level from current event folder.

Example:



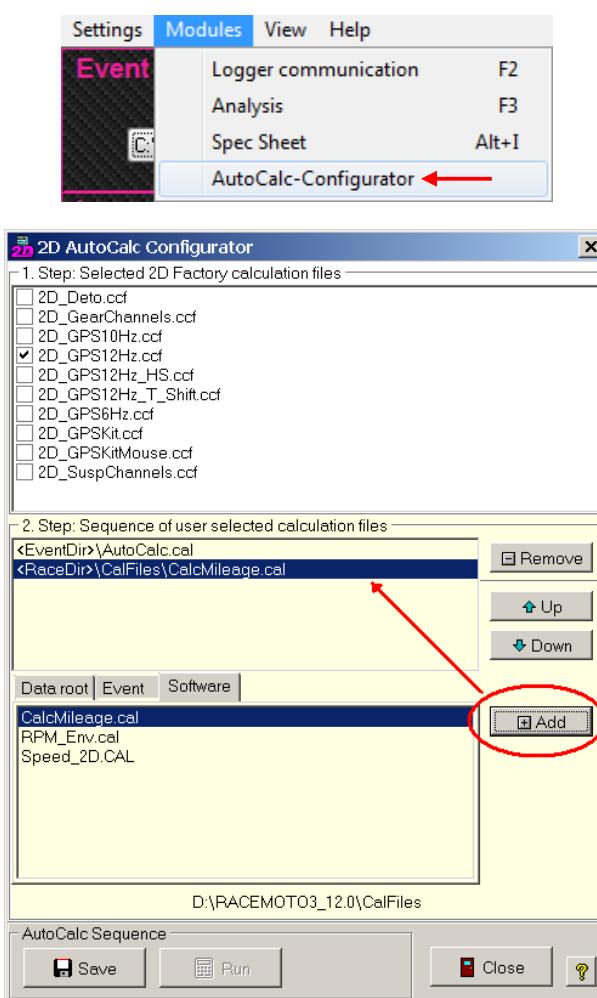
AutoCalc:

The 2D AutoCalc procedure is executed automatically after conversion.

Mileage calculation:

Mileage calculation can be activated via AutoCalc configurator.

For further details about the mileage function please refer to the help section.

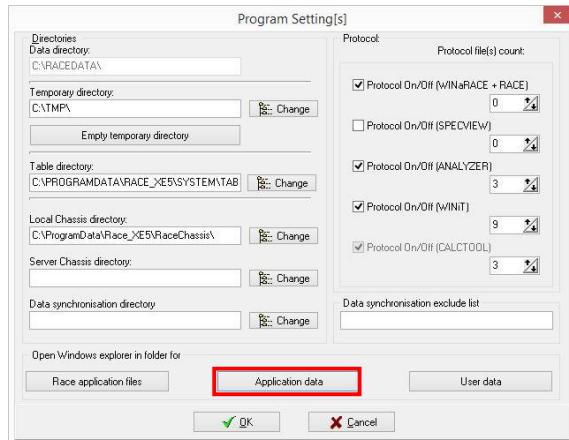


Weather information:

The contents of the 2D weather info dialog are stored inside the converted 2D measurement. The 2D weather info dialog can be run from *WinARace* toolbar.

6 Converter options

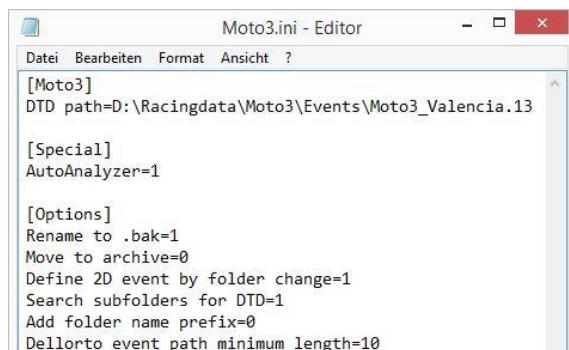
The following described option files (**Moto3.ini**, **Winarace.ini** and **Track names.txt**) may be edited using Notepad editor. They are located inside the application data folder. You can easily open the folder via WinARace: select “Settings”, “Folders – Protocol” and click on “Application data”.



NOTE: By default, no user modifications should be necessary here.

Moto3.ini:

The file **Moto3.ini** contains several options for the 2D converter. The default configuration of **Moto3.ini** looks as shown below:

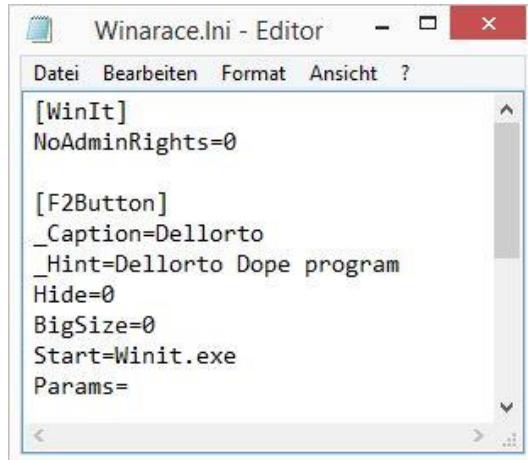


Meaning of the entries inside **Moto3.ini**:

Entries	Meaning	Possible values
[Moto3]		
DTD path	the path to current Dellorto event	Set by program
[Special]		
AutoAnalyzer	start 2D-Analyzer automatically after conversion	0=no, 1=yes
[Options]		
Rename to .bak	after conversion, rename .DTD file into .DTD.bak	0=no, 1=yes
Move to archive	after conversion, move .DTD file into subfolder "Converted_<Date>"	0=no, 1=yes
Define 2D event by folder change	2D event and measurement data will be stored at same location as Dellorto event	0=no, 1=yes
Search subfolders for DTD	Dellorto .DTD files are searched recursively in subfolders from current event path	0=no, 1=yes
Add folder name prefix	2D measurement name will be composed by <DTD folder name>_<DTD file name>	0=no, 1=yes
Dellorto event path minimum length	Security check to avoid problems when selecting hard disk root (e.g. "C:\")	Should be ≥ 8

Winarace.ini:

The file [Winarace.ini](#) controls the appearance of 2D start program *WinARace*. The default configuration of [Winarace.ini](#) looks as shown below:

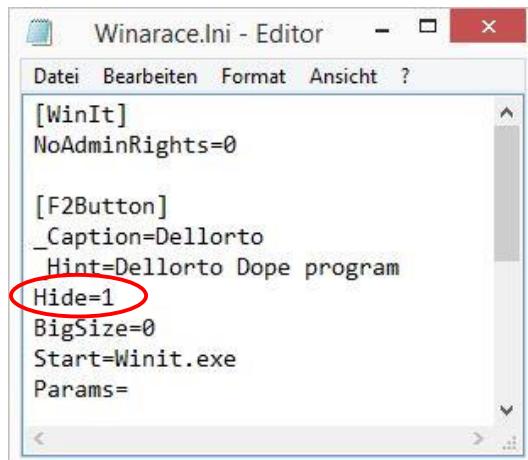


```
[WinIt]
NoAdminRights=0

[F2Button]
_Caption=Dellorto
_Hint=Dellorto Dope program
Hide=0
BigSize=0
Start=Winit.exe
Params=
```



You might modify the file [Winarace.ini](#) to hide the “Communication (F2)” button in *WinARace*. Change the “Hide” value from 0 to 1 and save your changes.



```
[WinIt]
NoAdminRights=0

[F2Button]
_Caption=Dellorto
_Hint=Dellorto Dope program
Hide=1
BigSize=0
Start=Winit.exe
Params=
```



Track names.txt:

The file [Track names.txt](#) holds the corresponding 2D race track name (right side of “=” character) to each Dellorto track name (left side). 2D race track names have extension .ren and are located inside folder C:\RaceMoto3_14.0\Circuits.

If you need to add more race tracks, you can easily modify the file [Track names.txt](#):



```
Aragon=Aragon
Assen=Assen 2010
Barcelona=Catalunya
Barcellona=Catalunya
Brno=Brno
Cartagena=Cartagen
Castellolli=Castellolli
Doha=Doha
Estoril=Estoril
Indianapolis=Indianapolis MotoGP
Jerez=Jerez
LeMans=LeMans
Misano=MISANO 2008
Motegi=Motegi
Mugello=Mugello
Nurburgring=Nuerb_sp
PhillipIsland=Phillip Island
Sachsenring=Sachsenring
Sepang=Sepang
Silverstone=Silverstone2010
Valencia=Valencia
```

Adding a line as described in the above example will associate the Dellorto track “[PhillipIsland.trk](#)” with the 2D track “[Phillip Island.ren](#)”.